

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Zhaoda Zhang et al. Art Unit : Unknown
Serial No. : Examiner : Unknown
Filed : February 25, 2004
Title : PEPTIDE-BASED MULTIMERIC TARGETED CONTRAST AGENTS

Mail Stop Patent Application

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449.

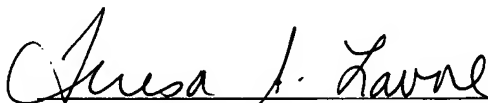
Under 35 USC §120, this application relies on the earlier filing date of application serial number 10/209,183, filed on July 30, 2002. The references were submitted to and/or cited by the Office in the prior application and, therefore, are not provided in this application.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: _____

2/24/04



Teresa A. Lavoie, Ph.D.

Reg. No. 42,782

Fish & Richardson P.C., P.A.
60 South Sixth Street
Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696

60198792.doc

CERTIFICATE OF MAILING BY EXPRESS MAIL

Express Mail Label No. EV321180589US

February 25, 2004

Date of Deposit

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 13498-010003	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Zhaoda Zhang et al.	
		Filing Date February 25, 2004	Group Art Unit

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	08/875,365					12/12/97
	AB	4,659,839	04/21/87	Nicolotti et al.			
	AC	4,678,667	07/07/87	Meares et al.			
	AD	4,880,008	11/14/89	Lauffer			
	AE	4,897,255	01/30/90	Fritzberg et al.			
	AF	5,637,759	06/10/97	Hearst et al.			
	AG	5,641,878	06/24/97	Dandliker et al.			
	AH	6,517,814	02/11/03	Liu			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AI	0 515 313 B1	08/09/00	EPO				
	AJ	WO 93/17719	09/16/93	PCT				
	AK	WO 95/19187	07/20/95	PCT				
	AL	WO 96/23524	08/08/96	PCT				
	AM	WO 96/23526	08/08/96	PCT				
	AN	WO 97/13490	04/17/97	PCT			Abstr.	
	AO	WO 01/08712	02/08/01	PCT				
	AP	WO 01/09188	02/08/01	PCT				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AQ	Aime et al., "Synthesis, Characterization, and $1/T_1$ NMRD Profiles of Gadolinium(III) Complexes of Monoamide Derivatives of DOTA-like Ligands. X-ray Structure of the 10-[2-[[[2-Hydroxy-1-(hydroxymethyl)ethyl]amino]-1-[(phenylmethoxy)methyl]-2-oxo-ethyl]-1,4,7,10-tetraazacyclododecane-1,4,7-triacetic Acid-Gadolinium(III) Complex," <u>Inorg. Chem.</u> , 1992, 31:2422-2428
	AR	Aime et al., "Multinuclear and multifrequency NMR study of gadolinium(III) complexes with bis-amide derivatives of ethylenedioxydiethylene-dinitrilotetraacetic acid," <u>J. Chem. Soc. Dalton Trans.</u> , 2000, pp. 3435-3440

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 13498-010003	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Zhaoda Zhang et al.	
		Filing Date February 25, 2004	Group Art Unit

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AS	Amedeo Jr. et al., "A Practical Manufacturing Synthesis of 1-(R)-Hydroxymethyl-DTPA: An Important Intermediate in the Synthesis of MRI Contrast Agents," <u>Synthetic Communications</u> , 1999, 29(14):2377-2391
	AT	Amedeo Jr. et al., "Preparation of N,N-BIS[2-[N',N'-BBIS[(Tert-Butoxycarbonyl)Methyl]-Amino]Ethyl-L-Aspartic Acid: An Intermediate in the Synthesis of MRI Contrast Agents," <u>Synthetic Communications</u> , 2000, 30(20):3755-3763
	AU	Augustijns et al., "Peptidyl Dipeptidase A-Catalyzed Metabolism of Delta Sleep-Inducing Peptide in Bovine Brain Microvessel Endothelial Cells: A Cell Culture Model of the Blood Brain Barrier," <u>Biochem. Biophys. Res. Comm.</u> , 1995, 210(3):987-994
	AV	Bakker et al., "In Vivo Application of [¹¹¹ In-DTPA-D-PHE ¹]-Octreotide for Detection of Somatostatin Receptor-Positive Tumors in Rats," <u>Life Sciences</u> , 1991, 49:1593-1601
	AW	Bligh et al., "Neutral Gadolinium(III) Complexes of Bulky Octadentate dtpa Derivatives as Potential Contrast Agents for Magnetic Resonance Imaging," <u>Polyhedron</u> , 1995, 14(4):567-569
	AX	Bulte et al., "Dysproium-DOTA-PAMAM Dendrimers as Macromolecular T2 Contrast Agents," <u>Invest. Radiol.</u> , 1998, 33(11):841-845
	AY	Caravan et al., "Gadolinium(III) Chelates as MRI Contrast Agents: Structure, Dynamics, and Applications," <u>Chem. Rev.</u> , 1999, 99:2293-2352
	AZ	Collen et al., "Thrombolysis with Human Extrinsic (Tissue-Type) Plasminogen Activator in Rabbits with Experimental Jugular Vein Thrombosis," <u>J. Clin. Invest.</u> , 1983, 71:368-376
	AAA	Deacon et al., "Degradation of Glucagon-Like Peptide-1 by Human Plasma <i>in Vitro</i> Yields an N-Terminally Truncated Peptide That Is a Major Endogenous Metabolite <i>in Vivo</i> ," <u>J. Clin. Endocrinol.</u> , 1995, 80(3):952-957
	ABB	Kellar et al., "Magnetic Field Dependence of Solvent Proton Relaxation by Solute Dysprosium(III) Complexes," <u>Invest. Radiol.</u> , 1998, 33(11):835-840
	ACC	Kojima et al., "Bioimaging of Nitric Oxide with Fluorescent Indicators Based on the Rhodamine Chromophore," <u>Anal. Chem.</u> , 2001, 73:1967-1973
	ADD	Kolc, "Amino Acids and Peptides. LXXXIX. Synthesis of L-4-Azalysine, D-4-Azalysine, and L-4-Analysine-[6- ¹⁴ C]," <u>Coll. Czech. Chem. Commun.</u> , 1969, 34:630-634
	AEE	Konings et al., "Gadolinium Complexation by a New DTPA-Amide Ligand. Amide Oxygen Coordination," <u>Inorg. Chem.</u> , 1990, 29:1488-1491
	AFF	Krieter et al., "In Vivo Metabolism of Atrial Natriuretic Peptide: Identification of Plasma Metabolites and Enzymes Responsible for Their Generation," <u>J. Pharmacol. Exp. Ther.</u> , 1989, 249(2):411-417
	AGG	Lauffer, "Paramagnetic Metal Complexes as Water Proton Relaxation Agents for NMR Imaging: Theory and Design," <u>Chem. Rev.</u> , 1987, 87:901-927
	AHH	Liu et al., "Labeling a Hydrazino Nicotinamide-Modified Cyclic Iib/IIla Receptor Antagonist with ^{99m} Tc Using Aminocarboxylates as Coligands," <u>Bioconjugate Chem.</u> , 1996, 7:63-71
	AII	Martin et al., "Gadolinium(III) Di- and Tetrachelates Designed for <i>in Vivo</i> Noncovalent Complexation with Plasma Proteins: A Novel Molecular Design for Blood Pool MRI Contrast Enhancing Agents," <u>Bioconjugate Chem.</u> , 1995, 6:616-623
	AJJ	Mühler and Hochhaus, "Metabolism of Dynorphin A 1-13 in Human Blood and Plasma," <u>Pharm. Res.</u> , 1995, 12(8):1165-1170

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 13498-010003	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Zhaoda Zhang et al.	
		Filing Date February 25, 2004	Group Art Unit

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AKK	Mühler et al., "Interspecies comparison of <i>in vitro</i> plasma degradation of dynorphin A 1-13," <u>Pharmazie</u> , 1996, 51(8):581-585
	ALL	Muller et al., "Physicochemical Characterization of MS-325, a New Gadolinium Complex, by Multinuclear Relaxometry," <u>Eur. J. Inorg. Chem.</u> , 1999, pp. 1949-1955
	AMM	Mühler et al., "Assessment of Complex Peptide Degradation Pathways via Structured Multicompartmental Modeling Approaches: The Metabolism of Dynorphin A1-13 and Related Fragments in Human Plasma," <u>J. Pharm. Sci.</u> , 1999, 88(9):938-944
	ANN	Murphey et al., "Metabolism of Bradykinin in Vivo in Humans: Identification of BK1-5 as a Stable Plasma Peptide Metabolite," <u>J. Pharmacol. Exp. Ther.</u> , 2000, 294:263-269
	AOO	Murru et al., "Luminescence Behaviour of Stable Europium and Terbium Complexes of Tetraaza Phosphinates: Efficient Through-space Energy Transfer from Phenyl to Terbium," <u>J. Chem. Soc. Chem. Commun.</u> , 1993, pp. 1116-1118
	APP	Muto et al., "Detecting Deep Venous Thrombosis with Technetium-99m-Labeled Synthetic Peptide P280," <u>J. Nucl. Med.</u> , 1995, 36(8):1384-1391
	AQQ	Oefner et al., "High-Resolution Liquid Chromatography of Fluorescent Dye-Labeled Nucleic Acids," <u>Analytical Biochem.</u> , 1994, 223:39-46
	ARR	Pearson et al., "Somatostatin Receptor-Binding Peptides Labeled with Technetium-99m: Chemistry and Initial Biological Studies," <u>J. Med. Chem.</u> , 1996, 39:1361-1371
	ASS	Powell et al. "Peptide Stability in Drug Development. II. Effect of Single Amino Acid Substitution and Glycosylation on Peptide Reactivity in Human Serum," <u>Pharm. Res.</u> , 1993, 10(9):1268-1273
	ATT	Powell et al., "Structural and Dynamic Parameters Obtained from ¹⁷ O NMR, EPR, and NMRD Studies of Monomeric and Dimeric Gd ³⁺ Complexes of Interest in Magnetic Resonance Imaging: An Integrated and Theoretically Self-Consistent Approach," <u>J. Am. Chem. Soc.</u> , 1996, 118:9333-9346
	AUU	Ramachandran et al., "New Multimeric Magnetic Resonance Imaging Agents," <u>Invest. Radiol.</u> , 1998, 33(11):779-797
	AVV	Reubi et al., "Unsulfated DTPA- and DOTA-CCK analogs as specific high-affinity ligands for CCK-B receptor-expressing human and rat tissues in vitro and in vivo," <u>Eur. J. Nucl. Med.</u> , 1998, 25(5):481-490
	AWW	Solomon et al., "Focal Infection Imaging Using an In-111 Labeled Antagonist Chemotactic Peptide," <u>J. Nucl. Med.</u> , 1994, 35(5):45P, Abstract No. 172
	AXX	Stall et al., "Rearrangement and expression of endogenous immunoglobulin genes occur in many murine B cells expressing transgenic membrane IgM," <u>Proc. Natl. Acad. Sci. USA</u> , 1988, 85:3546-3550
	AYY	Tóth et al., "The Role of Water Exchange in Attaining Maximum Relaxivities for Dendrimeric MRI Contrast Agents," <u>Chem. Eur. J.</u> , 1996, 2(12):1607-1615
	AZZ	Tóth et al. "Tuning water-exchange rates on (carboxymethyl)iminobis-(ethylenitrilo)tetraacetate (dtpa)-type gadolinium(III) complexes," <u>J. Chem. Soc., Dalton Trans.</u> , 1997, pp. 1587-1594
	AAAA	Tóth et al., "Direct assessment of water exchange on a Gd(III) chelate bound to a protein," <u>J. Biol. Inorg. Chem.</u> , 1998, 3:606-613

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 13498-010003	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant Zhaoda Zhang et al.	
		Filing Date February 25, 2004	Group Art Unit
(37 CFR §1.98(b))			

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	ABBB	Uggeri et al., "Novel Contrast Agents for Magnetic Resonance Imaging. Synthesis and Characterization of the Ligand BOPTA and Its Ln(III) Complexes (Ln = Gd, La, Lu). X-ray Structure of Disodium (<i>TPS-9-145337286-C-S</i>)-[4-Carboxy-5,8,11-tris(carboxymethyl)-1-phenyl-2-oxa-5,8,11-triazatridecan-13-oato(5-)]gadolate(2-) in a Mixture with Its Enantiomer," <u>Inorg. Chem.</u> , 1995, 34:633-642
	ACCC	Weinmann et al. "A New Lipophilic Gadolinium Chelate as a Tissue-Specific Contrast Medium for MRI," <u>Magn. Reson. Med.</u> , 1991, 22:233-237
	ADDD	Wettergren et al. "Amidated and non-amidated glucagon-like peptide-1 (GLP-1): non-pancreatic effects (cephalic phase acid secretion) and stability in plasma in humans," <u>Reg. Peptides</u> , 1998, 77:83-87
	AEEE	Zhao et al., "Oxidation of Primary Alcohols to Carboxylic Acids with Sodium Chlorite Catalyzed by TEMPO and Bleach," <u>J. Org. Chem.</u> , 1999, 64:2564-2566

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	